

Date: Fri, 1 Oct 93 07:59:28 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1162
To: Info-Hams

Info-Hams Digest Fri, 1 Oct 93 Volume 93 : Issue 1162

Today's Topics:

Amateur Radio Elmers List Info and Administrivia
Changes to Amateur Radio Elmers Resource Directory
eliminating RFI from hf rig to PC
Fly fishing net?
FT-727R Deviation setting?
How much are 6 land incoming bureau envelopes?
Info on ham stores wanted (was Re: Info on Ham Stores In DC?)
Packet questions???
repeaters info needed in Chicago, West Lafayette and Cincinnati
walkman - radio transmitter

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 1 Oct 93 11:00:10 GMT
From: ogicse!uwm.edu!vixen.cso.uiuc.edu!moe.ksu.ksu.edu!crcnis1.unl.edu!
news.unomaha.edu!news@network.ucsd.edu
Subject: Amateur Radio Elmers List Info and Administrivia
To: info-hams@ucsd.edu

Posted-By: auto-faq 2.4
Archive-name: radio/ham-radio/elmers/admin
Revision: 1.4 04/25/93 23:02:45
Changes: pit-manager.mit.edu is now rtfm.mit.edu

This administrivia file and the companion Amateur Radio Elmers Resource
Directory are intended for non-commercial distribution via Usenet. Any

other uses, please E-mail for permission.

A Brief Historical Overview:

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If there is any one constant in the changing state of the communications art, it is that "Hams" (Amateur Radio Operators) have always been on the forefront of it. Rumors abound where the term "Ham" came from. Some of the more amusing are described at the end of this article.

Regardless of origin of the name, a "Ham" is universally recognizable as one who experiments in radio and communications.

Whether it be constructing a low-power CW radio with vacuum tubes, or designing TCP/IP packet networks, such experimentation has historically spilled over into the mainstream such as was the case with Edwin Armstrong, who developed the regenerative oscillator and FM radio, or General Curtis LeMay (W6EZV) who was instrumental in making Single-Sideband the communications standard for the Strategic Air Command (1947-1992, now reorganized into a joint command called StratComm) and eventually the U.S. Air Force. Although packet-switching techniques originated from DARPA (Defense Advanced Research Projects Agency) and the ARPANet, no one can deny the tremendous influence that amateurs have had in demonstrating the viability of TCP/IP and AX.25 communications via radio links. The efforts of AMSAT (the Amateur Satellite Corporation), including the development of many ham satellites and the low-orbiting Microsats (communications satellites no bigger than a breadbox that use store-and forward packet techniques), have certainly advanced the state-of-the-art in communications, one of the defined purposes of the Amateur Radio Service, as recognized by international treaty.

Since in many cases hams are writing "the book", there is often no "book" or other established reference for a beginner to refer to. Traditionally, information has been passed on from ham to ham via word-of-mouth. Like many of the traditional crafts, a variation of the Master-Apprentice system has emerged, the Elmer-Novice relationship. Called "Elmers" because they are usually older and wiser, having the benefit of many years in the hobby, including several failed projects, and an electric shock or two, they have traditionally been the mainstay of amateur radio, and the source of many new hams, particularly those interested in working on emerging technologies.

Even more importantly, Elmers provided an outlet for the impatient newcomer who wanted "to know everything, and right away." Faced with such a request, a good Elmer will smile and proceed to lead the novice through some project or operating experience. Several hours, days, or weeks later, the novice would have his answers, but would have earned

them. Even better, the sense of accomplishment would boost the novice's confidence and nudge him or her down the road to being a model, experienced ham operator.

Many present hams feel that such an experience is missing today. In today's hustle-bustle world, the response to such natural curiosity and desire to learn is, more often than not, "I'm too busy" or "RTFM." As a result, the quality of new hams declines and the knowledge and operating habits they develop in their first formative months and years leave much to be desired. And the very same hams who claim that they "can't understand the new generation" also, in almost the same breath, lament about the "decline of amateur radio."

What is an Elmer today?
+++++

An Elmer today is of any age, male or female, who has some expertise and is willing to share it with beginners. Elmers don't even need to be licensed amateurs, just people with knowledge in some area of electronics or communications technology.

What is a Usenet Elmer?
+++++

With the ever-widening scope of the Internet, and the amateur radio newsgroups on Usenet, the potential for Elmers to share their knowledge to a wide audience has never been greater. To that end, I have started to maintain a list of such Elmers. Volunteers need only send me their name, E-mail address, and area of expertise. I have set up an administrivia mailbox for this purpose (elmers-request@unomaha.edu, the default Reply-To: of this message).

Those desiring a more extensive list, or who need more specific assistance, are encouraged to contact Rosalie White, WA1ST0, Educational Services Manager at the American Radio Relay League, 225 Main St., Newington, CT 06111 or via electronic mail addressed to rwhite@arrl.org.

How may I obtain the latest copy of the Elmers List?
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There are currently 4 ways of obtaining the Elmers List. Any site at least reachable by Internet E-mail can use options 3 or 4:

1. Usenet News: The latest copy of the list can be found in the companion posting to this message, "Amateur Radio Elmers Resource Directory." Since the list is cross-posted to rec.radio.amateur.misc, rec.radio.info, rec.answers, and news.answers on the 1st of each month,

with an expiration date 6 weeks into the future, there should always be a copy available at most news sites. Check your newsreader documentation for information about reading previously-read articles.

2. Anonymous FTP: If your site is directly connected to the Internet, you may retrieve the latest copy via File Transfer Protocol (FTP) from the following sites:

```
ftp.cs.buffalo.edu  /pub/ham-radio/elmers*
rtfm.mit.edu       /pub/usenet/news.answers/radio/ham-radio/elmers/
```

3. Mailing-List: Since the list is cross-posted to rec.radio.info, the latest copy may be obtained from the mailing-list gateway for that newsgroup (along with many other informational articles about radio) when it is published each month. To subscribe, send E-mail to:

listserv@ucsd.edu

and in the BODY (not the Subject) of the message, write:

subscribe radio-info

The server may not be able to determine your return address. In that case write:

subscribe radio-info (your E-mail address)

You should get an acknowledgement very shortly.

4. Mail-Server: If you don't want to read through the entire gateway of rec.radio.info, or want a copy of the list right away, send E-mail to:

mail-server@rtfm.mit.edu

and in the BODY (not the Subject) of the message, write:

```
send usenet/news.answers/radio/ham-radio/elmers/admin
send usenet/news.answers/radio/ham-radio/elmers/list
send usenet/news.answers/radio/ham-radio/elmers/diff
```

and the latest copy of the list should be sent to you E-mail within 24 hours (the mail-server uses batch priority to reduce system demand).

How may I contribute to the Elmers List?

+++++

By using this resource, you are benefitting the net by obtaining

assistance in the fastest and most efficient way possible. By volunteering to appear on this list, you are contributing to the good reputation of the radio-related newsgroups.

Thanks to all the volunteer Elmers, as well as courteous list users, for making this service a success.

--

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu (personal mail)
elmers-request@unomaha.edu (Elmers List administrivia)

* Possible origins of the word HAM:

The acronym "Home Amateur Mechanic" or...

from the Cockney pronunciation of "L'amateur" or...

the initials of the founder of the American Radio Relay League, Hiram Maxim, W1AW (his actual middle name being Percy apparently notwithstanding) or...

from the call letters of one of the first amateur stations at Harvard, H.A.M. (please, no flames from W1XM at MIT)

Dale Mosby, N7PEX, offers the explanation that HAM must stand for "Hardly Any Money," considering the investment one could make in the hobby.

Knowledgeable individuals from the American Radio Relay League (ARRL), and other radio historians, seem to agree that the terms "Ham" and "Lid" (an inept operator) both originated with landline telegraphy. A "Ham" was a show-off and a "Lid" was a telegraph operator so inexperienced, he had to use a pot or can lid to rest his telegraph sounder on to properly copy the code.

As an interesting historical footnote, early telegraph operators may have been the first to experience the infamous curse of our communications age, Repetitive Stress (or "Carpal Tunnel") Syndrome (called "Glass Arm" in those days, which encouraged the invention of the semi-automatic or "bug" key).

(Larry E. McDonald, N6ZMB, wrote to point out another plausible origin, which doesn't necessarily contradict the ARRL version. The term "ham" may have been derived from "ham-fisted" or "ham-handed" to describe poor telegraph operators who were hired from the ranks of radio operators. Or maybe "ham-fisted" and "ham-handed" are derived from "ham." Who knows?)

Date: 1 Oct 93 11:00:32 GMT
From: ogicse!uwm.edu!vixen.cso.uiuc.edu!moe.ksu.ksu.edu!crcnis1.unl.edu!
news.unomaha.edu!news@network.ucsd.edu
Subject: Changes to Amateur Radio Elmers Resource Directory
To: info-hams@ucsd.edu

Posted-By: auto-faq 2.4
Archive-name: radio/ham-radio/elmers/diff

(Note: This diff file is taken from the list body only.)

/usr/bin/diff -c (last month's) (this month's)

*** /u3/pschleck/faq/elmers/list.body.old Wed Sep 1 06:00:54 1993
--- /u3/pschleck/faq/elmers/list.body.new Fri Oct 1 06:00:03 1993

*** 1,4 ***

! Amateur Radio Elmers Resource Directory (as of 09/01/93)

+++++

David Andrews ZL2SX

--- 1,4 ---

! Amateur Radio Elmers Resource Directory (as of 10/01/93)

+++++

David Andrews ZL2SX

*** 258,267 ***

Ken Chilton

KA1TIH, Advanced Class

! 27-6 Royal Crest Dr.

Marlborough, MA 01752

chilton@emc.com

- (508) 481-0038

Design Engineer

Amateur Qualifications:

--- 258,266 ---

Ken Chilton

KA1TIH, Advanced Class

! 53 Alan Road

Marlborough, MA 01752

chilton@emc.com

Design Engineer

Amateur Qualifications:

*** 269,274 ***

--- 268,274 ----

446.675 -- 223.86 -- 53.47

Assistant Radio Officer for the City of Marlborough

Emergency Management Agency

+ NESMC Region 440 MHz frequency coordinator

Trained in Electronics Engineering, Electrical Engineering,

Computer Sciences, Computer Programming, and Management

Knowledgeable in Rules, Regs, and interpretations

*** 753,758 ***

--- 753,779 ----

+++++

+ Daniel J. Meredith N7MRP

+ Arizona Packet Coordinator

+ Voice/Data = (602) 956-2566

+ Ax.25 = n7mrp@n7mrp.az.usa.na

+ Internet = dan@aznet.stat.com

+

+ Owner of the F6FBB Packet Bulletin Board System Mailing List.

+

+ The purpose of this list is to provide both sysops and networkers

+ with tricks/tips/help as well as software updates for the F6FBB

+ packet bulletin board system.

+

+ To subscribe, send E-mail to listserv@stat.com, and in the body of

+ the message, write:

+

+ subscribe f6fbb-list

+

+ An acknowledgement/welcome message should follow very shortly.

+

+ +++++

+

John Monson WB0PLW, AAA9EC

johnm@is.sprint.com

*** 1275,1280 ***

--- 1296,1321 ----

+++++

+ John Welch N9JZW, NNNOWYZ
+ jjw@seastar.org
+
+ Navy/Marine Corps (NMC) MARS
+
+ ++++++
+
+ Vikki Welch WV9K, NNN0AEE
+ vikki@seastar.org
+
+ Navy/Marine Corps (NMC) MARS
+ Region Four ECOMM Planning Officer: NNN0ASG TWO
+
+ There are other NMCARS Members on the Internet and I'll be compiling a
+ list, if anyone is interested. I'd also welcome any correspondence
+ with other members of MARS. We are currently considering a MARS
+ conference on a dial-up BBS.
+
+ ++++++
+

Areas of Interest: ARES/RACES, Emergency Comm, and ARRL
Field Organization.

--

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu (personal mail)
elmers-request@unomaha.edu (Elmers List administrivia)

Date: 1 Oct 93 13:43:46 GMT
From: ogicse!uwm.edu!math.ohio-state.edu!sdd.hp.com!hpscit.sc.hp.com!
hpubmaa.esr.hp.com!garhow@network.ucsd.edu
Subject: eliminating RFI from hf rig to PC
To: info-hams@ucsd.edu

In article <28gsib\$gh1@charm.magnus.acs.ohio-state.edu>, wvanhorn@magnus.acs.ohio-state.edu (William E Van Horne) writes:

|> Garry -
|>
|> You have a lot of r.f. in your shack. Isolating the keyboard helped,
|>
|> First thing is to be sure you have a good ground on your entire
|> system. Be sure to use only one ground point for all your gear, then
|> take that ground to an outside groundstake, not to a water pipe.

Grounding is a problem. I just set up the shack this week after being off hf for about ten years. I live in the city in a condo. It is the front half of an old house and we have three floors. The shack is on the third floor. I am using an end fed wire connected to an MFJ 949E tuner. I have an MFJ low pass filter between the tuner and the transmitter.

I have tried attaching a ground to the copper pipe from the heating system, we have forced hot water heat, and to the ground on the electrical outlet. Neither of these did much, the transmitter case was hot with rf when transmitting. I now have two quarter wave length radials for 40M and 20M attached to the ground lug on the tuner. This eliminated the hot xmitter case but I still have rfi to the PC. It is worse on 20M.

I think this weekend I will try converting the end fed wire to a dipole and see what effect this has. If I still have a problem I will start adding some chokes.

Thanks for the tips.

Garry - KE0SH

--

Garry Howard	Hewlett-Packard Company
Technical Consultant	29 Burlington Mall Road
Professional Services Organization	Burlington, MA 01803 USA
garhow@hpubmaa.esr.hp.com	

[I do not speak for HP officially or otherwise.]

Date: 1 Oct 93 13:28:42 GMT
From: news-mail-gateway@ucsd.edu
Subject: Fly fishing net?
To: info-hams@ucsd.edu

Many months ago, I read a classified ad in QST announcing that there is a net for fly fishers (no pun intended!) that supposedly meets on the second Tuesday of every month at 0300 UTC on 14.260. Net control was someone in 7 land (great fly fishing out that way!!). For a few months, I tuned in at the appointed time and every time I heard nothing. Does anyone know if the net is still in operation?

73,
Scott W01G

=====

Scott Sminkey	email: sasminkey@eng.xyplex.com
Software Sustaining Engineering	voice: 508 952-4792

Xyplex, Inc.
295 Foster St.
Littleton, MA 01460

fax: 508 952-4887
(Opinions, comments, etc. are mine,
not Xyplex's...)

Date: Fri, 1 Oct 1993 08:11:16 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!nuts2u.enet.dec.com!little@decwrl.dec.com
Subject: FT-727R Deviation setting?
To: info-hams@ucsd.edu

I'm trying to find out how to adjust the deviation on my Yaesu FT-727R.
If anyone out there would happen to know the magic pot to tweak, I'd
really appreciate the information. In particular, the DTMF pad
deviation is barely 2 kHz, which isn't enough to operate the controls
of our local repeater reliably.

73,
Todd
N9MWB

Date: 1 Oct 93 14:26:33 GMT
From: ogicse!uwm.edu!linac!att!cbnewsm!jeffj@network.ucsd.edu
Subject: How much are 6 land incoming bureau envelopes?
To: info-hams@ucsd.edu

In article <1993Sep30.213714.23692@TorreyPinesCA.ncr.com>
kevin@TorreyPinesCA.ncr.com (Kevin Sanders) writes:
>Jeff,
>What is the address of the 6-land incoming bureau? I've been hamming for
>over 2 years now and I'm sure there's some cards for me. Hopefully they
>didn't throw them out when my callsign changed earlier this year.

Kevin, I don't have the address here at work with me but it is in the
ARRL Operating Manual. Probably the best way to go about getting your
incoming QSL cards is to send them \$10 and 20 or 30 mailing labels with
your callsign on them. They will then use their envelopes to send you
your cards. Makes it much easier. Thanks by the way to others that replied
to my post and suggested that I do what I just suggested Kevin do. 73!

Jeff

--

Jeff Jones AB6MB		OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
jeffj@seeker.mystic.com		Canada/USA Free Trade cost Canada 400,000 jobs.
Infolinc BBS 510-778-5929		Want to guess how many we'll lose to Mexico?

Date: 1 Oct 93 13:15:29 GMT
From: psinntp!arrl.org@uunet.uu.net
Subject: Info on ham stores wanted (was Re: Info on Ham Stores In DC?)
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>In article <2343@arrl.org> ehare@arrl.org (Ed Hare - KA1CV) writes:

>>to consider a store a ham-radio store is if one can walk in and buy
>>a ham-radio transmitter or transceiver and some of the appropriate
>>accessory equipment.

>You want a list of all 4300 Radio Shack stores?

: -).

Hello, Gary. I think we can safely leave them off the list. The new ham usually knows where to find the nearest RS. What is needed is a list of the other ones, though, for the new ham or a ham planning to visit a new area, etc.

73, Ed

Ed Hare, KA1CV
American Radio Relay League
225 Main St.
Newington, CT 06111
(203) 666-1541 - voice
ARRL Laboratory Supervisor
RFI, xmtr and rcvr testing

ehare@arrl.org

The opinions expressed in my posts do not necessarily represent League policy, but I can probably get in trouble for them anyway.

Date: Thu, 30 Sep 1993 13:38:52 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!caen!usenet.coe.montana.edu!netnews.nwnet.net!ns1.nodak.edu!plains!gregg@network.ucsd.edu
Subject: Packet questions???
To: info-hams@ucsd.edu

Thomas Jay Pachner (pachner@csd4.csd.uwm.edu) wrote:

: I would have posted this to the r.r.a.digital, but my system won't let me.

: I just purchased a Kantronics Kam, and I hooked it up and even connected to
: a station. But now after it connects, what can I do. I tried different
: things, but couldn't accomplish much. Any advice would be helpful.

: --

: Thomas Jay Pachner ==- Music Major, Bassist, Gamer, and Amateur Operator
: University of Wisconsin - Milwaukee - pachner@csd4.csd.uwm.edu
: BARNEY MUST DIE!!!!!!!!!!
: Amateur Call Sign: N9UUJ - took 72 days

Date: Thu, 30 Sep 1993 12:03:08 GMT
From: mentor.cc.purdue.edu!noose.ecn.purdue.edu!dynamo.ecn.purdue.edu!
young@purdue.edu
Subject: repeaters info needed in Chicago, West Lafayette and Cincinnati
To: info-hams@ucsd.edu

In article <2CAA5A9D.9996@news.service.uci.edu> feng@jedi.eng.uci.edu (Feng Liu)
writes:

>I am going to Chicago, West Lafayette and Cincinnati area next week.
>Could anybody give me information on major repeaters in those areas?

I can help you with Lafayette/W. Lafayette. Two major 2-meter
machines: W9YB on 146.16/146.76, and WB9RVN on 147.735/147.135.
One 440 system in town, KA9VXS on 448.775/443.775. All freqs are in/out.

>Thanks.
>
>Feng Liu
>KE6AFV

--

Mike Young KA9HZE	young@ecn.purdue.edu	
Purdue University EE Dept.	...!pur-ee!young	
W. Lafayette, IN 47907		

Date: 1 Oct 93 12:43:55 GMT
From: mulvey!rich@uunet.uu.net
Subject: walkman - radio transmitter
To: info-hams@ucsd.edu

SCUNNANE@ESTEC.BITNET wrote:
: Can anyone tell me if such a thing exists to allow me to play my walkman

: on the car radio ? What I'm looking for is something to plug into the
: headphones socket of the walkman that transmits a radio signal that can
: be picked up by the car radio ?

Well, if all you're interested in is using the car stereo as an
amp/speaker system, then just go to radio shack and get their
"CD/Cassette? adapter. (This assumes that you have a cassette deck,
of course.) You plug one end into the headphone jack of your walkman,
and the other end looks like a cassette. Pop that into your deck, and
voila!

- Rich

--

Rich Mulvey Amateur Radio: N2VDS Rochester, NY
rich@mulvey.com "Ignorance should be painful."

Date: Thu, 30 Sep 1993 13:03:40 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!darwin.sura.net!news.udel.edu!
udel!gvls1!rossi@network.ucsd.edu
To: info-hams@ucsd.edu

References <1993Sep28.004830.10581@ke4zv.atl.ga.us>,
<MAS.93Sep28104038@porgy.jp1.na, <1993Sep29.193548.21499@ke4zv.atl.ga.us>0
Subject : Re: Antenna Covenants AGAIN (but now with a twist!)

In article <1993Sep29.193548.21499@ke4zv.atl.ga.us> gary@ke4zv.UUCP (Gary Coffman)
writes:

>sa.gov>

>

>This is the working plan announced by the FCC. Provided the HDTV
>transmission standard is worked out in detail and equipment is
>available, HDTV broadcasting is supposed to start in 1996. The
>1996 Olympics in Atlanta is supposed to all be done in HDTV.
>There'll be an 8 year phase in period, and in 2004 the last VHF
>NTSC transmitters will be shut down. It appears certain that a
>spectrum compatible digital HDTV standard will be ready, and the
>FCC has decreed that all HDTV will be at UHF. They've got a plan
>to allow VHF broadcasters to simulcast NTSC on their existing
>equipment, and HDTV on a new UHF assignment for the phase in period.

You can't be serious!! Seems like half of the TV stations in my
area *still* aren't even transmitting in STEREO yet!!!

=====

Pete Rossi - WA3NNA

rossi@vfl.paramax.COM

Unisys Corporation - Government Systems Group
Valley Forge Engineering Center - Paoli, Pennsylvania

Date: Thu, 30 Sep 93 12:39:44 GMT
From: mnemosyne.cs.du.edu!nyx!lkollar@uunet.uu.net
To: info-hams@ucsd.edu

References <28asm8\$2g1@lester.appstate.edu>, <pineappCE4G2t.F4K@netcom.com>,
<CE5H3G.7AJ@fiu.edu>
Subject : Re: Best way to learn code?

The way I learned -- actually, how I got my speed up -- was to listen to the code tapes on the way to work in the morning and on the way home in the evening. Since I had a 1 hr. commute (each way) back then, I had plenty of practice time. I got my speed up from a shaky 5wpm* to solid 15 wpm in about three weeks.

That's one way to make good use of time otherwise wasted.... :-)

*I'd learned Morse about 15 years ago in high school, even got a Novice ticket, but moved on to bigger (and not necessarily better) things until about 2 yrs ago when I got interested again. (ex-WB8YQM... I sure do get nasty callsigns, huh?)

--
Larry Kollar, KC4WZK | I like CW, but that doesn't mean I think every ham
lkollar@nyx.cs.du.edu | should have to learn it.
"You mean you came back from the dead, to tell me I'm *odd*?"

Date: Thu, 30 Sep 1993 13:06:12 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!howland.reston.ans.net!
darwin.sura.net!news.udel.edu!udel!gvls1!rossi@network.ucsd.edu
To: info-hams@ucsd.edu

References <27q6qt\$pf@safety.ics.uci.edu>,
<1993Sep23.115925.5137@lmpsbbs.comm.mot.com>, <1171@auratek.COM>net
Subject : Re: New HF Rig

In article <1171@auratek.COM> epacyna@auratek.COM (Edward Pacyna) writes:
>

> Dealers sell whatever is easy. Whatever has the greatest demand and the
> highest value (e.g. performance, features, quality, service, price).

Dealers sell what ever they will make the most money on.

=====

Pete Rossi - WA3NNA	rossi@vfl.paramax.COM
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Unisys Corporation - Government Systems Group
Valley Forge Engineering Center - Paoli, Pennsylvania

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End of Info-Hams Digest V93 #1162
